



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/954,754  | 09/18/2001  | Charles J. Rice      | 4810-002            | 8506             |
| 24112   | 7590        | 11/03/2005           | EXAMINER            |                  |
| COATS & BENNETT, PLLC<br>P O BOX 5<br>RALEIGH, NC 27602 |             |                      | NGUYEN, PHONG H     |                  |
|   |             | ART UNIT             | PAPER NUMBER        | 3724             |
| DATE MAILED: 11/03/2005                                 |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

Tink

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/954,754             | RICE, CHARLES J.    |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Phong H. Nguyen        | 3724                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 22 August 2005.
- 2a) This action is FINAL.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,2,6-10,13-16,20-24 and 27-40 is/are rejected.
- 7) Claim(s) 3-5,11,12,17-19,25 and 26 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

1. In view of the Appeal brief filed on 08/22/2005, PROSECUTION IS HEREBY REOPENED. New grounds of rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 30 and 31 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 30 recites the limitations "the end of a tubular work piece" in line 1, "the work piece" in step (a) and "the tubular work piece" in step (d). There is insufficient antecedent basis for these limitations in the claim.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 102***

5. Claims 32-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Lentino (5,083,376).

Regarding claim 32, Lentino teaches a saw capable of forming a tube comprising a work piece holder 18, a tool (B) insertable into an end of a tubular work piece, a rotating dual action cam (38, 68) and a tool holder 72. See Figs. 1-8.

Regarding claims 33-35, 38 and 39, the first cam 38 and the second cam 68 are best seen in Fig. 4.

Regarding claims 36 and 37, the first phase is when the saw blade moves forward, the second phase is when the saw blade moves backward, and the third phase is when the saw blade is at its neutral position (element 50 is at either end of the slot 76).

Regarding claim 40, the first cam 38 contact the first surface (bottom of the second cam) and the second cam 68 contacts the second surface defined by element 52. See Figs. 4.

***Claim Rejections - 35 USC § 103***

6. Claims 1, 2, 6-10, 13-16, 20-24, 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belzil (4,459,886) in view of Platt et al. (6,269,721 B1), hereinafter Platt.

Regarding claims 1 and 15, Belzil teaches a tube-forming device comprising a workpiece holder 16 for receiving a tubular workpiece 20, a tool 28, and a tool holder 22 for receiving the tool. See Figs. 2-7 and 10-15. Belzil teaches using hydraulic pistons to drive the tool holder. Platt teaches using a rotating cam 120 to drive a piston 140. See Fig. 3. Therefore, it would have been obvious to one skilled in the art to replace the hydraulic pistons in Belzil with rotating cams as taught by Platt to operate the tube-forming device in an environment where hydraulic pistons are not available.

Regarding claims 2 and 16, a die block 21 is best seen in Fig. 2.

Regarding claims 6-9 and 20-23, the tool 28 is best seen in Figs. 2, 3 and 6.

Regarding claims 10 and 24, a carrier block having an opening for receiving the tool 28 is best seen in Figs. 10 and 13.

Regarding claims 13, 14, 27 and 28, a biasing mechanism 30 is best seen in Figs. 2 and 10.

Regarding claim 29, see Figs. 2, 14 and 15.

Regarding claims 30 and 31, Belzil teach a method for forming an end of a tubular work piece substantially as claimed except for the step of using a dual action cam to reciprocate a tool. See Figs. 2-7 and 10-15. Belzil teaches using hydraulic pistons to drive the tool holder instead of cams. Platt teaches using a rotating cam 120 to drive a piston 140. See Fig. 3. Therefore, it would have been obvious to one skilled in the art to replace the hydraulic pistons in Belzil with rotating cams as taught by Platt to operate the tube-forming device in an environment where hydraulic pistons are not available.

***Allowable Subject Matter***

7. Claims 3-5, 17-19, 11, 12, 25 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 3 and 17 are allowable for setting for a die insertable into the opening of the die block. The die 21 in Belzil is on the back of the die block 16.

Claims 11 and 25 are allowable for setting for the carrier block having two openings for receiving the two cams.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phong H. Nguyen whose telephone number is 571-272-4510. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan Shoap can be reached on 571-272-4514. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

Art Unit: 3724

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PN: *PM*

October 28, 2005

*acj*  
Allan N. Shoap  
Supervisory Patent Examiner  
Group 3700